

In the Claims

1. – 16. (cancelled)

17. (previously presented) A network unit which is capable of use in a cascaded stack of network units and includes:

- a multiplicity of ports for receiving and forwarding addressed data packets,

- a switching engine for directing received packets to at least one port in accordance with address data in the packets;

- at least two cascade ports for receiving packets from and sending packets to adjacent network units in the cascaded stack; and

- means for detecting an operational failure between this network unit and an adjacent network unit in the stack and for controlling the switching engine to redirect packets which would otherwise be sent from a particular port to that adjacent network unit to be forwarded from another port whereby to be sent to a different network unit in the stack; and

- wherein this network unit is responsive to control data indicating an operational failure between two other units in a stack to enter a bypass mode to cause packets received at a cascade port and intended for further transmission on the cascade to be forwarded without being re-directed by the switching engine.

18. (cancelled)

19. (original) A network unit according to claim 17 wherein the unit has at least one cascade port for reception and forwarding of packets in a first direction around the cascade and at least one cascade port for reception and forwarding of packets in a second direction around the cascade.

20. (original) A network unit according to claim 19 and having at least two cascade ports for each of the first and second directions.

21. (original) A network unit according to claim 17 wherein the unit includes control logic for forwarding control frames to and receiving control frames from one each of two control paths and for thereby determining the operational status of other network units so as to control said switching engine.

22. (original) A network unit according to claim 21 wherein the control logic detects said operational failure.

23. (original) A network unit according to claim 17 and operative to provide for each packet that is forwarded from a cascade port a header which includes a destination port field that identifies a destination port and the network unit on which that destination port is located.

24. (original) A network unit according to claim 23 wherein the header includes a field that indicates the validity of the destination port field.

25. (original) A network unit according to claim 21 wherein the said header includes a source port field which identifies a source port by which the packet has been received and the network unit on which that source port is located.

26. (original) A network unit according to claim 17 wherein the unit provides for each packet that it forwards from a cascade port a header portion which network units in a stack have and have not been traversed by the packet.

27. (original) A network unit according to claim 26 wherein said header portion is a bit mask.

28. (original) A network unit according to claim 26 wherein the unit responds to said header portion to discard the packet if said header portion indicates that the packet has already traversed the unit.

29. (original) A network unit according to claim 26 wherein the unit responds to said header portion and to an indication that a destination port for the packet is known to determine whether the destination port is on the unit and the unit responds to said header portion and to an indication that a destination port is unknown to perform a look-up in an address database for the destination port.

30.- 42. (cancelled)